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LIFTING CONFIDENTIALITY OF FRAND ROYALTIES IN SEP
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No patent dispute in recent years draws more attention than the “Smartphone Wars.” At the center stage of the Smartphone Wars is the “fair, reasonable, and non-discriminatory” (FRAND) commitment to license standard-essential patents (SEPs). Later added to the stage is the new form of SEP enforcement targeting small businesses and end-users. As a result, the efficacy of FRAND commitments comes under criticism from the antitrust enforcement agency, leading scholars, and the President of the United States.

With a view to breathing life into the meaning of “FRAND,” this Article explores arguments against confidentiality of FRAND royalties in SEP arbitration, primarily focusing on an analogy to section 294 of the Patent Act. Section 294 may provide an adequate platform for this discussion because it already lifted confidentiality of patent validity and infringement in the interest of the public and competition. Similarly, lifting confidentiality of FRAND royalties in SEP arbitration could be an effective measure to tackle unfair competition and deceptive business practices and to empower the public in the Smartphone Wars and in the face of SEP enforcement.

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I. INTRODUCTION

No patent dispute in recent years draws more attention than the “Smartphone Wars.” The Smartphone Wars refer to a series of ongoing patent and antitrust lawsuits between multinational high-tech giants in the smartphone industry.¹ At the center stage of the Wars is the “fair, reasonable, and non-discriminatory” (FRAND) commitment to license standard-essential patents (SEPs). The FRAND commitment reflects a promise by participants in the collective standard-setting process to license their patents “essential” to the standardized technologies on “fair, reasonable, and non-discriminatory” terms.² Later added to the stage is the new form of SEP enforcement targeting small businesses and end-users.³

The industry’s viewpoints as to why FRAND is heavily litigated in the Smartphone Wars are in flux. SEP holders on the one hand are alleged to “have not kept up with the pace of [smartphone] innovation” and now seek to use SEPs to exclude a standard implementer from the market or raise its cost of competition.⁴ Standard implementers on the other hand are alleged to free-ride on “significant time and resources in conceptualizing, modeling, and testing the solutions that [SEP

1. Paul H. Saint-Antoine, *IP, Antitrust, and the Limits of First Amendment Immunity: Shouting “Injunction” in a Crowded Courthouse*, 27 A.B.A. ANTITRUST MAG. 41, 41 (2013).

2. Jorge L. Contreras & David L. Newman, *Developing a Framework for Arbitrating Standards-Essential Patent Disputes*, 1 J. DISP. RESOL. (forthcoming 2014) (manuscript at 24-25), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2335732&download=yes. FRAND is also known as RAND (reasonable and non-discriminatory), and they are used interchangeably. For consistency purposes, this Article uses the term “FRAND.”

3. OFFICE OF THE PRESS SEC’Y, THE WHITE HOUSE, FACT SHEET: WHITE HOUSE TASK FORCE ON HIGH-TECH PATENT ISSUES 2-3 (2013), <http://www.whitehouse.gov/the-press-office/2013/06/04/fact-sheet-white-house-task-force-high-tech-patent-issues>.

4. Bruce Sewell, Proposed Consent Agreement in the Matter of Robert Bosch GmbH, FTC File No. 121-0081, Public Comments of Apple Inc. Before the Fed. Trade Comm’n 2 (Jan. 9, 2013), <http://www.ftc.gov/policy/public-comments/comment-00015-5>.

holders] offer to contribute to the standard.”⁵ As a result, the efficacy of FRAND commitments comes under criticism from the government branches responsible for antitrust enforcement and leading scholars. A common thread linking those critics is the view that wielding SEPs can amount to an act of unfair competition, particularly where it violates the FRAND commitment.

Confidentiality is one of the key advantages motivating a party to choose arbitration instead of court litigation. Arbitration can provide an efficient forum that can protect a party’s business reputation or sensitive information from public disclosure. In addition, arbitrators are contractually and ethically bound by a duty of confidentiality to protect the integrity of the arbitration process.

A patent license has become increasingly more important to business entities seeking to avoid the cost of litigating patent disputes. For example, a party may desire to keep confidential certain business information relating to past licensing practices, such as a royalty rate previously paid to a licensor or granted to a licensee for the use of a patent at issue or other comparable patents. In aiding parties in establishing conditions of the pertinent market, information relating to past licensing practices has been the most important factor in calculating “a reasonable royalty.”⁶

This Article proceeds from the premise that, to breathe life into the meaning of the FRAND commitment, lifting confidentiality of FRAND royalty rates is critical. With this background, this Article explores arguments against confidentiality of FRAND royalties in SEP arbitration, primarily focusing on the argument drawing from an analogy to section 294 of the Patent Act. Section 294 can provide an adequate platform for this multidisciplinary discussion (arbitration, patent law, and antitrust law), because it already lifted confidentiality of patent validity and infringement in the interest of the public and competition.

Tracing the background of why and how section 294 was enacted, Part II first looks into the historical development of patent arbitrability. The remainder of Part II explains the antitrust

5. John Moore & John Han, Proposed Consent Agreement in the Matter of Motorola Mobility LLC and Google Inc., FTC File No. 121-0120, Public Comments of Ericsson Inc. Before the Fed. Trade Comm’n 3 (Feb. 22, 2013), http://www.ftc.gov/sites/default/files/documents/public_comments/2013/02/563708-00019-85568.pdf.

6. See *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1325-32 (Fed. Cir. 2009) (citing second factor in *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970)).

implications of FRAND commitments to illustrate that a FRAND royalty rate has a public character in the interest of the public and competition. To review the public character of FRAND commitments through contemporary lenses and also to exemplify inherent problems in confidential FRAND rates, Part III examines FRAND disputes in the eyes of the government branches and academia. They include (1) the first judicial framework for FRAND royalty calculations in *Microsoft Corp. v. Motorola, Inc.*, (2) the Federal Trade Commission's proposed binding arbitration in the *FTC-Google* settlement, (3) the 2013 presidential disapproval of the U.S. International Trade Commission's FRAND determination, and (4) Professors Mark Lemley's and Carl Shapiro's proposed "baseball-style" arbitration. Finally, examining how the consuming public and end-users are affected by a confidential FRAND rate, Part IV explores and sums up arguments against confidentiality of FRAND royalties in SEP arbitration.

II. PATENT ARBITRABILITY AND DISPUTES OVER FRAND LICENSES

While it is a private property right, there is a public character in a patent. The development of arbitrability in patent validity and infringement can be characterized as moving toward reconciling the public interest in patents (legal monopoly) and the rising cost of patent litigation. In doing so, Congress designed section 294 of the Patent Act to serve the public interest in patents by requiring a patent validity/infringement finding in arbitration to be publicly available.

Conversely, arbitration of patent royalty conflicts has traditionally been employed to resolve commercial disputes. However, antitrust considerations inherent in the course of the standard-setting process have posed different competitive challenges to standard development organizations. This dilemma led to requiring the "FRAND" commitment to license standard-essential patents at a "fair, reasonable, and non-discriminatory" rate. As a result, despite the private, commercial nature of patent royalties, the competitive concerns from which the FRAND commitment originates give FRAND royalties a public nature as well.

A. *The Development of Arbitrability in Patent Disputes*

1. *Lear, Inc. v. Adkins*

The public interest in patent validity is well articulated in the 1969 Supreme Court decision, *Lear, Inc. v. Adkins*.⁷ There, a licensee challenged the validity of a patent licensed to it, and the licensor in response invoked the doctrine of estoppel (licensee estoppel) to bar the licensee from asserting invalidity.⁸ In announcing that the federal policy favors “free competition,” the Court allowed the licensee to go forward and challenge the validity. It reasoned that what is not claimed by a patent pertains to the public domain, and the federal policy to encourage free competition by challenging bad patents trumps the contractual doctrine of licensee estoppel.⁹ Namely, underlying *Lear* is the idea that sorting out bad patents serves to broaden the public domain for “free competition.”

Lear also reasoned that granting a patent is merely an administrative action, because the U.S. Patent and Trademark Office (USPTO) reaches decisions *ex parte* without the aid of third parties interested in patent validity.¹⁰ If a possibility of invalidation is reasonable, a third party mulling over taking a license would be more inclined to challenge validity, because an invalidated patent carries no legal force regardless of what a license says.¹¹ Noting that licensees may well be “*the only individuals* with enough economic incentive to challenge the patentability of an inventor’s discovery,”¹² *Lear* stressed the importance of protecting the public from “the impact bad patents may have on the consuming public.”¹³

7. *Lear, Inc. v. Adkins*, 395 U.S. 653, 670 (1969).

8. *Id.* at 655-56.

9. *Id.* at 663-64.

10. *Id.* at 670.

11. *See Troxel Mfg. Co. v. Schwinn Bicycle Co.*, 465 F.2d 1253, 1255 (6th Cir. 1972) (“[A] final adjudication of invalidity of a licensed patent operates as an *eviction* from the license, terminating the licensee’s obligation to continue making royalty payments after that date.”) (emphasis added).

12. *Lear*, 395 U.S. at 670 (emphasis added).

13. *See Megan M. La Belle, Against Settlement of (Some) Patent Cases*, 67 VAND. L. REV. 375, 419 (2014).

2. Divergent Arbitrability of Validity/Infringement and Royalty Disputes

The reach of *Lear* turns out to be broader than what *Lear* was concerned with (validity), encompassing not only patent scope (infringement), but also patent licenses. First, building upon *Lear*'s predominant public policy considerations, the courts expressed skepticism over arbitrability of patent validity.¹⁴ Since *Lear*, a patent's inherent conflict with "free competition" was the central argument against arbitrability of patent validity.¹⁵ Also attributed to *Lear* was that a patentee in a license negotiation may not insist on the "no-challenge" clause, a provision in patent licenses that acknowledges the validity of patents and forecloses future validity challenges.¹⁶

Similarly, the courts did not permit an arbitrator to have the authority to determine patent infringement,¹⁷ because *Lear* was also influential to patent scope to the extent that a finding of infringement is premised on a valid patent. Most recently in 2014, the Supreme Court in *Medtronic, Inc. v. Mirowski Family Ventures, LLC* was willing to interpret the reach of *Lear* to explicitly encompassing patent infringement.¹⁸ In holding that a burden of proof on patent infringement remains unchanged even if a case was initiated by a licensee seeking a declaration of non-infringement, the Court in *Medtronic* quoted *Lear* with a slight modification: "[L]icensees may often be the only individuals with enough economic incentive to litigate questions of a patent's scope."¹⁹

14. See *Beckman Instruments, Inc. v. Technical Dev. Corp.*, 433 F.2d 55, 63 (7th Cir. 1970) ("[Patent validity] questions are inappropriate for arbitration proceedings and should be decided by a court of law, given the great public interest in challenging invalid patents.") (citing *Lear*, 395 U.S. at 670).

15. See *id.* at 59.

16. See *La Belle*, *supra* note 13, at 420. But the courts are generally more receptive to no-challenge clauses that are incidental to actual or potential litigation. See *id.*; see also *Flex-Foot, Inc. v. CRP, Inc.*, 238 F.3d 1362, 1370 (Fed. Cir. 2001) (holding that no-challenge clauses may be permitted in settlement agreements).

17. See *Diematic Mfg. Corp. v. Packaging Indus., Inc.*, 381 F. Supp. 1057, 1061 (S.D.N.Y. 1974) ("This issue of infringement, we think, as well as any related issues of patent validity, should be decided not by the arbitrators, but by a court of law[:] Questions of patent law are not mere private matters.").

18. *Medtronic, Inc. v. Mirowski Family Ventures, LLC*, 134 S. Ct. 843, 852 (2014).

19. *Id.* (quoting *Lear*) (emphasis added) (internal quotation mark omitted). Compare *id.*, with *Lear*, 395 U.S. at 670 ("Licensees may well be the only

In addition to the public interest inherent in clearing out “bad” patents under *Lear*, legal scholars also observed that a licensee’s *private* interest comes into play against conceding patent validity and infringement. Fearing the expense and risk of litigation, licensees may find it cheaper to sign a license, even when they have “grave doubts” about a patent’s validity and scope.²⁰ Moreover, a licensee may well develop a conviction later that a newly-discovered prior art calls into question the validity and scope of a licensed patent.²¹

Conversely, however, the courts were generally more willing to enforce the arbitration clause in patent royalty disputes, because competitive concerns under *Lear* could be attenuated in royalty disputes. Since a patent royalty rate is of a commercial nature, the courts have viewed it more appropriately as a matter reflecting bargaining positions of the parties, of which patent validity or infringement is one chip to play with, rather than a matter directly linked to the public interest against patent monopoly.²² Also, because a royalty dispute usually involves sophisticated parties, it may not pose a significant “disparity in bargaining power.”²³ Consequently, the courts have rarely set aside arbitration clauses in patent royalty disputes.

3. Addition of Section 294 to the Patent Act

Congress in 1982 turned the tide in favor of voluntary arbitration of patent validity and infringement by amending the Patent Act to include section 294: “A contract involving a patent or any right under a patent may contain a provision requiring *arbitration* of any dispute relating to *patent validity or infringement* arising under the contract.”²⁴ Addition of section 294 was made in

individuals with enough economic incentive to challenge *the patentability of an inventor’s discovery.*”) (emphasis added).

20. Brief of Legal Scholars as Amici Curiae in Support of Petitioner at 18, *Medtronic Inc. v. Boston Scientific Corp.*, 695 F.3d 1266 (Fed. Cir. 2012), *rev’d sub nom.* *Medtronic, Inc. v. Mirowski Family Ventures, LLC*, 134 S. Ct. 843 (2014) (No. 12-1128).

21. *See id.*

22. *See Hanes Corp. v. Millard*, 531 F.2d 585, 600 (D.C. Cir. 1976) (urging the district court to refer royalty disputes to arbitration); *see also Willemijn Houdstermaatschappij, BV v. Standard Microsystems Corp.*, 103 F.3d 9, 14 (2d Cir. 1997) (recognizing arbitrability of a royalty payment dispute under the most-favored-licensee clause).

23. *See Cir. City Stores, Inc. v. Adams*, 532 U.S. 105, 132 (2001) (Stevens, J., dissenting).

24. 35 U.S.C. § 294(a) (2013) (emphasis added).

line with the growing concerns over “the expenses and disruptions caused by patent lawsuits,”²⁵ and with the recognition that “potential complexity of [patent validity] should not suffice to ward off arbitration.”²⁶ The House report also summarizes “numerous advantages” of arbitrating patent validity and infringement:

The advantages of arbitration are many: it is usually cheaper and faster than litigation; it can have simpler procedural and evidentiary rules; it normally minimizes hostility and is less disruptive of ongoing and future business dealings among the parties; it is often more flexible in regard to scheduling of times and places of hearings and discovery devices; and, arbitrators are frequently better versed than judges and juries in the area of trade customs and the technologies involved in these disputes.²⁷

Consequently, bifurcated patent arbitrability between validity/infringement and royalty disputes merges into unity, to the extent that any agreement to submit to arbitration “shall be valid, irrevocable, and enforceable.”²⁸ Moreover, a validity/infringement finding by arbitration is binding only upon the parties to the arbitration.²⁹ Thus, arbitrating patent validity and infringement becomes part of the Federal Arbitration Act’s (FAA) “national policy favoring arbitration.”³⁰

More importantly, however, the public interest as linked to patent validity and scope (infringement) was not subsumed under the FAA.³¹ Rather, Congress added subsections relating to the public interest in patent validity and scope. Under subsection (e), an arbitration award remains “unenforceable” until a party notifies

25. Konstantinos Petrakis, *The Role of Arbitration in the Field of Patent Law*, 52 DISP. RESOL. J. 24, 28 (1997) (quoting the Position Paper by the Committee for Economic Development, Subcommittee on Technology Policy, Mar. 1979).

26. *Mitsubishi Motors Corp. v. Soler Chrysler-Plymouth, Inc.*, 473 U.S. 614, 633 (1985).

27. H.R. Rep. No. 97-542, at 13 (1982).

28. 35 U.S.C. § 294(a).

29. *Id.* § 294(c).

30. 9 U.S.C. § 2 (2013); *Southland Corp. v. Keating*, 465 U.S. 1, 10 (1984).

31. *See, e.g., United States v. Stein*, 452 F. Supp. 2d 230, 247 n.41 (S.D.N.Y. 2006) (“[T]he public interest in matters of patent validity trumped the FAA until Congress enacted specific legislation to the contrary.”).

the USPTO of the award.³² Further, subsection (d) directs the USPTO, upon receipt of the notice, to enter the arbitration award in the record of the file wrapper of arbitrated patents, which is available to the public and any interested third parties.³³

Although the legislative history behind the enactment of section 294 is “scant,”³⁴ the House report did cite *Beckman Instruments, Inc. v. Technical Development Corp.*,³⁵ a Seventh Circuit case that criticized arbitrability of patent validity disputes following *Lear*.³⁶ Moreover, it is noteworthy that subsection (e), which renders unenforceable arbitral awards if not reported to the PTO, was *newly* added to what was believed to be the model of section 294, Senate Bill 2054 in 1973.³⁷ In fact, Bill 2054 itself disappointed the patent bar at the time, as it was seen as a failure to limit the role of antitrust laws in patent licensing.³⁸ Thus, it can be inferred from Congress’s indirect citation to *Lear*, more so to the disappointment of the patent bar, that the new addition of subsection (e) was credited to *Lear*. This background of section 294 evidences *Lear*’s strong influence on its enactment.

Under this new framework of section 294, arbitration clauses of patent validity/infringement no longer arouse automatic suspicion from the judicial bench. At the same time, section 294 preserves the public interest in the transparent patent system

32. 35 U.S.C. § 294(e) (“The award shall be *unenforceable* until the notice required by subsection (d) is received by the Commissioner.”) (emphasis added).

33. *Id.* § 294(d) (“The Commissioner shall, upon receipt of either notice, enter the same in the record of the prosecution of such patent.”).

34. Thomas G. Field, *Patent Arbitration: Past, Present and Future*, 24 IDEA 235, 243 (1984) (“[T]he legislative history is scant indeed.”).

35. H.R. Rep. No. 97-542, at 12 (1982).

36. See *Beckman Instruments, Inc. v. Technical Dev. Corp.*, 433 F.2d 55, 63 (7th Cir. 1970) (quoting the district court’s remark) (“In considering the validity of patent claims, a court makes decisions crucial not only to the parties involved, but of vital importance to the public generally.”).

37. H.R. Rep. No. 97-542, at 12 (mentioning S. 2504, 93d Cong. § 294(c) (1973)). See 121 Cong. Rec. 671 (1975) (“(c) Within two months after the award is rendered [sic], the patentee shall give notice thereof in writing to the Commissioner. . . . The Commissioner shall, upon receipt of such notice, enter the same in the record of the prosecution of such patent.”).

38. Hugh Scott & Dennis Unkovic, *Patent Law Reform: A Legislative Perspective of an Extended Gestation*, 16 WM. & MARY L. REV. 937, 947 (1975) (quoting Karl E. Bakke, Gen. Counsel, Dept. of Commerce, Address at Sheraton Park Hotel, Washington, D.C. (Oct. 11, 1973) (“I know some, if not most, of you are disappointed that proposals to clarify and stabilize the interference between the antitrust laws and patent licensing provisions have not been introduced.”)).

because a party to arbitration is obliged to report the award for the PTO's record-making process. As a result, an invalidity or non-infringement finding reported to the PTO would send a message to third parties interested in acquiring a license that the subject patent is likely susceptible to similar challenges in court or in subsequent arbitration.³⁹ While the arbitration award has no direct bearing on third parties,⁴⁰ the bottom line is that a party in arbitration can neither negotiate around the framework of section 294, nor keep secret an arbitrated finding on patent validity and scope.

B. Antitrust Considerations in the Standard-Setting Process

1. Inherent Antitrust Concerns over Standard Development Organizations

“[S]tandards development organization” (SDO) refers to an organization that “plans, develops, establishes, or coordinates *voluntary consensus* standards using procedures that incorporate the attributes of openness, balance of interests, due process, an appeals process, and consensus.”⁴¹ Since SDOs are open to divergent business interests of members, achieving consensus is not cut and dry. More critically, most complications come from traditional antitrust concerns over their collective activities.

By nature of their operations, SDOs have a potential to pose *both* anticompetitive harms and procompetitive benefits. Typically, SDOs include members of horizontal and vertical business relations, making the standard-setting process potentially *anticompetitive*, because members often have incentives to restrain competition, and implicit in the standard is an agreement not to compete with certain types of products.⁴² At the same time, SDOs have a potential to achieve *procompetitive* benefits, if an effective standard set upon aggregating the merits of technical judgments lowers the cost of production and enhances compatibility among various products, so that consumers can easily switch from one product to another (“interoperability benefit”).⁴³

39. Contreras & Newman, *supra* note 2, at 40.

40. 35 U.S.C. § 294(c) (2013).

41. Standards Development Organization Advancement Act, 15 U.S.C. § 4301(a)(8) (2013) (emphasis added).

42. *Allied Tube & Conduit Corp. v. Indian Head, Inc.*, 486 U.S. 492, 500 (1988).

43. *Microsoft Corp. v. Motorola, Inc.*, No. C10-1823JLR, 2013 U.S. Dist. LEXIS 60233, at *23-24 (W.D. Wash. Apr. 25, 2013).

Importantly, the Supreme Court in *Allied Tube & Conduit Corp. v. Indian Head, Inc.* strongly warned of the antitrust risks arising from the circumstance in which SDO participants could manipulate or abuse the standard-setting process. At issue in *Allied Tube* was whether a private standard-setting association was entitled to antitrust immunity under the *Noerr-Pennington* doctrine, where members were found to have coordinated an action to vote against approval of a rival's product.⁴⁴ Rooted in the petition clause of the First Amendment, the *Noerr-Pennington* doctrine can immunize a private party from antitrust liability, if the competitive harm results from the government actions that the party has requested.⁴⁵ The private association claimed the *Noerr* immunity, arguing that it was a "quasi-legislative" body because the government routinely adopted the standard it promulgated.⁴⁶

The Court held that *Noerr* protection did not attach and the association could be liable under antitrust law, particularly where "meaningful safeguards" to prevent members from restraining trade were not in place.⁴⁷ The Court noted that it was precisely because of the potential for procompetitive benefits and the presence of "safeguards" that antitrust courts applied the rule of reason, not the per se rule of illegality, to the conduct of SDOs.⁴⁸ Consequently, it announced that "the hope of procompetitive benefits depends upon the existence of *safeguards* sufficient to prevent the standard-setting process from being biased by members with economic interests in restraining competition."⁴⁹

2. The FRAND Commitment as a "Safeguard"

In setting SDO patent policies, the concern about anticompetitive harm grows more sharply. Patents are a specific

44. *Allied Tube*, 486 U.S. at 496.

45. See FED. TRADE COMM'N, ENFORCEMENT PERSPECTIVES ON THE NOERR-PENNINGTON DOCTRINE 3-4 (2006), <http://www.ftc.gov/policy/policy-actions/advocacy-filings/2006/10/ftc-staff-report-concerning-enforcement-perspectives>. However, not every private effort or conduct, even if "genuinely intended to influence governmental action," is *Noerr* protected. See *Allied Tube*, 486 U.S. at 503.

46. *Id.* at 501.

47. *Id.* at 500-01 (citing *Am. Soc'y of Mech. Eng'rs, Inc. v. Hydrolevel Corp.*, 456 U.S. 556, 572 (1982)).

48. *Id.* at 501; see also 15 U.S.C. § 4302 (2013) ("[T]he conduct of . . . a standards development organization while engaged in a standards development activity, shall not be deemed illegal per se; such conduct shall be judged on the basis of its reasonableness.").

49. *Allied Tube*, 486 U.S. at 509 (emphasis added).

“carve-out” from antitrust laws, as patent law is designed to promote innovation by granting limited monopolies.⁵⁰ Still a challenge for the courts is measuring what level of patent protection is sufficient to encourage innovation without seriously impairing competition.⁵¹ SDO patent policies are designed to resolve such inherent conflicts between antitrust and patent laws.

As one of those SDO patent policies, the FRAND commitment is put in place to keep the *ex post* value of a patented technology in check. When a standard is widely implemented, power to demand more than the *ex ante* value that a patentee could have demanded absent the standardization comes to the hands of SEP owners.⁵² In contrast, standard implementers become “locked in,” because they already invested costs to manufacture compliant products, and thus switching to viable alternatives at that stage would be costly.⁵³ Such additional *ex post* value flowing from the standardization itself operates as leverage for SEP holders to insist on a higher royalty than the *ex ante* value of the patented technology, which was once encumbered with viable alternatives.⁵⁴

The ability of SEP holders to capture such *ex post* value is called “patent hold-up.”⁵⁵ A threat of “patent hold-up” runs afoul of the rationale underlying the standard-setting process. For the patent hold-up not only raises an implementer’s cost of producing compliant devices on a competitive level, but also disrupts procompetitive benefits of SDOs on a consumer level, including interoperability benefits.⁵⁶

50. Fed. Trade Comm’n v. Actavis, Inc, 133 S. Ct. 2223, 2238 (2013) (Roberts, C.J., dissenting).

51. Andrew I. Gavil, William E. Kovacic & Jonathan B. Baker, ANTITRUST IN PERSPECTIVE: CASES CONCEPTS AND PROBLEMS IN COMPETITION POLICY 1194 (2d ed. 2008).

52. *Microsoft*, 2013 U.S. Dist. LEXIS 60233, at *37-38.

53. *Broadcom Corp. v. Qualcomm Inc.*, 501 F.3d 297, 310 (3d Cir. 2007).

54. *Microsoft*, 2013 U.S. Dist. LEXIS 60233, at *38-40.

55. *Broadcom*, 501 F.3d at 310. But other scholars argue that the concerns that SEP holders may extract “excessive” royalties are not mathematically grounded, observing that patent hold-up does not necessarily arise in SEP negotiations and licensees may often engage in “reverse hold up.” See Gregor Langus, Vilen Lipatov & Damien Neven, *Standard Essential Patents: Who Is Really Holding Up (and When)?* 27 (Graduate Inst. of Int’l & Dev. Studies, Working Paper No. 04/2013), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2222592.

56. See Federal Trade Commission’s Statement on the Public Interest as Third Party at 2, filed on June 6, 2012, in Certain Wireless Communication Devices, Portable Music & Data Processing Devices, Computers and

This is where the FRAND commitment comes into play. To encourage widespread adoption of a voluntary standard, most SDOs require their members to commit to license standard-essential patents on “fair, reasonable, and non-discriminatory (FRAND) terms.”⁵⁷ By relying on this promise to license on FRAND terms, standard implementers could be free from the fear of patent assertions and the possibility of becoming locked in. There is little doubt that the FRAND commitment is one of the “safeguards” that *Allied Tube* called for, which makes procompetitive potentials of SDOs more effective.⁵⁸ It is all the more so, because the FRAND commitment is made in exchange for the monopoly power spontaneously accrued to a patented technology by virtue of the standardization.⁵⁹ Consequently, it can be concluded that a FRAND royalty has a *public* character in the interest of fair competition.

III. FRAND DEBATES AND THE ROLE OF ARBITRATION IN THE EYES OF THE GOVERNMENT BRANCHES AND ACADEMIA

Notwithstanding its distinct “public” character, the meaning of FRAND is loosely defined in most SDO patent policies, and many SDOs have disclaimed a responsibility for interpreting FRAND terms.⁶⁰ As a result, the FTC in its settlement with Google Inc., Judge James L. Robart of the U.S. District Court of Washington in *Microsoft Corp. v. Motorola, Inc.*, and the U.S. Trade Representative in disapproving the USITC’s FRAND determination in the 337-TA-794 investigation all have endeavored to tighten what it means to be FRAND. Arbitration as a forum for FRAND disputes has come under the spotlight, exemplified by the FTC’s recommendation to use binding arbitration and by

Components Thereof, USITC Inv. No. 337-TA-745, *available at* www.ftc.gov/os/2012/06/1206ftcwirelesscom.pdf.

57. Contreras & Newman, *supra* note 2, at 25.

58. *But see* Richard A. Epstein, F. Scott Kieff & Daniel F. Spulber, *The FTC, IP, and SSOs: Government Hold-Up Replacing Private Coordination*, 8 J. COMPETITION L. & ECON., no. 1, 2012 at 20 (arguing that flexibility in the FRAND commitment is a strength, not a weakness).

59. *See* *Apple, Inc. v. Motorola, Inc.*, 869 F. Supp. 2d 901, 914 (N.D. Ill. 2012) (Posner, J., sitting by designation) (“Motorola agreed to license its standards-essential patents on FRAND terms as a *quid pro quo* for their being declared essential to the standard.”) (emphasis in original), *aff’d in part*, 757 F.3d 1286, 1331-32 (Fed. Cir. 2014) (affirming the denial of injunctive relief upon applying the rule under *eBay Inc. v. Merc Exchange, L.L.C.*, 547 U.S. 388 (2006)).

60. Contreras & Newman, *supra* note 2, at 25.

Professors Mark Lemley's and Carl Shapiro's proposal to use baseball-style arbitration. These governmental and academic efforts to fix the FRAND regime are illustrative of some of the problems inherent in confidential FRAND licensing rates.

A. *The FTC-Google Settlement: The Role of Arbitration in FRAND Disputes*

How the U.S. antitrust agency views the role of arbitration in resolving FRAND disputes is best described in the FTC's enforcement action against Google and its subsidiary, Motorola.⁶¹ There, the FTC alleged that Google and Motorola engaged in unfair methods of competition by renegeing on the FRAND commitment to license SEPs and by seeking injunctions in courts and the U.S. International Trade Commission against "willing" licensees.⁶² In settling the case, Google was ordered to abide by its FRAND commitments.⁶³

The FTC Order sets forth an important framework on how to conduct FRAND negotiations and outlines the role of arbitration therein. Under the Order, before seeking an injunction on SEPs, Google must first provide a potential licensee with a written offer conforming to the FRAND commitment, and then provide the licensee with an irrevocable offer to enter *binding arbitration* to determine license terms that have not been agreed upon.⁶⁴ As such, binding arbitration constitutes the critical piece in setting Google's FRAND royalty rates. Also, it is of note that in submitting to arbitration, the Order separates issues of patent validity and infringement from FRAND licenses. That is, arbitration is binding only insofar as the award determines FRAND rates, given that the Order expressly allows licensees to contest validity and infringement.⁶⁵

At least from the FTC's perspective, the Order mandates Google to periodically report *in detail* how Google has complied

61. *Id.* at 32.

62. Google Inc., FTC File No. 121-0120, Statement of the Federal Trade Commission, 1 (Jan. 3, 2013), *available at* <http://www.ftc.gov/os/caselist/1210120/130103googlemotorolastmtofcomm.pdf>.

63. *Id.*

64. Google Inc., FTC File No. 121-0120, Analysis of Proposed Consent Order to Aid Public Comment, 6 (Jan. 3, 2013), *available at* <http://www.ftc.gov/os/caselist/1210120/130103googlemotorolaanalysis.pdf>. *See also* Google Inc., FTC File No. 121-0120, Decision and Order, 9-13 (July 23, 2013), *available at* <http://www.ftc.gov/os/caselist/1210120/130724googlemotorolado.pdf>.

65. *Id.* at 9.

with the Order.⁶⁶ However, Google's initial compliance report appears to contain little information relating to FRAND rates.⁶⁷ Rather, Google requested the FTC to redact "highly confidential business information," which the FTC did accordingly.⁶⁸ In this light, the FTC seemed to preserve for Google the option to keep confidential the arbitrated FRAND rates.

Without knowing the negotiating history of the settlement, any speculation on why Google's confidentiality option was preserved is of little merit. However, the *FTC-Google* settlement at least signals the necessity of another measure to tackle FRAND royalty disputes at a more fundamental level. While the FTC views binding arbitration as "the most promising" mechanism for resolving FRAND disputes,⁶⁹ the Order would have been more effective in alleviating competitive concerns from FRAND disputes had it been designed to make Google's arbitrated rates *publicly available* to any third parties interested in implementing the standard and acquiring a SEP license to it.

B. Microsoft v. Motorola: The First Judge-Made FRAND-Rate Framework

Microsoft Corp. v. Motorola, Inc. is the first judicial articulation on how to set a FRAND rate in SEP disputes. There, Microsoft sued Motorola for breach of contract, claiming that Motorola engaged in patent infringement actions in breach of its FRAND obligations.⁷⁰ As usual, "FRAND" is not precisely defined in the patent policies of the SDOs, and thus, there was a significant disparity as to what Motorola and Microsoft each perceived as real FRAND rates.⁷¹ Recognizing the importance of the *ex ante* value of a patented technology, Judge Robart contemplated a hypothetical bilateral negotiation between a SEP holder and a standard implementer to determine the *ex ante* value of FRAND rates. In doing so, Judge Robart grappled with the *Georgia-Pacific* factors widely used to determine a reasonable royalty in the context of patent infringement.⁷²

66. *Id.* at 13.

67. Google Inc., FTC File No. 121-0120, Initial Compliance Report (Jan. 31, 2013), *available at* <http://www.ftc.gov/os/caselist/1210120/130204googlemotorolaorder.pdf>.

68. *Id.* at 1.

69. Contreras & Newman, *supra* note 2, at 33.

70. *Microsoft*, 2013 U.S. Dist. LEXIS 60233, at *10-11.

71. *Id.* at *13-14.

72. *Id.* at *19 (citing *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116 (S.D.N.Y. 1970)).

Judge Robart first drew two distinctions between the *Georgia-Pacific* factors and the calculation of FRAND rates.⁷³ First, a SEP holder is under an obligation to license its patents on FRAND terms, whereas a normal patent holder is not. Second, standard implementers will anticipate “royalty-stacking,” a situation in which a single product potentially infringes on a number of patents. Thus, a firm selling that product may have to pay royalties in aggregate to be free from patent assertions,⁷⁴ because it must consider taking licenses from multiple SEP holders, not just one, to comply with the standard. Having said that, Judge Robart set out a framework suited to determining FRAND royalty rates in modifying of the *Georgia-Pacific* factors.⁷⁵

In addressing royalty-stacking concerns, Judge Robart anticipated that the parties in an *ex ante* negotiation will take into account other SEPs and the value attached to them.⁷⁶ For example, Judge Robart noted that Motorola’s royalty offer poses “significant stacking concerns,” given that there were at least 92 other entities owning SEPs.⁷⁷ Assuming similar offers from other SEP holders, Motorola’s offer cannot be a FRAND royalty rate because the royalty in aggregate easily exceeding a product price runs counter to the rationale behind the FRAND commitment – widespread adoption of the standard.⁷⁸

The recurring theme in both modifying the *Georgia-Pacific* factors and addressing royalty-stacking is how the parties in a hypothetical negotiation are able to calculate the *ex ante* value of SEPs independent of the *ex post* incremental value. For this matter, siding with Microsoft’s argument that a patent pool is “the closest real-world” comparison for determining a FRAND royalty rate, Judge Robart found references of FRAND rates in the patent pools, of which Motorola is a participant.⁷⁹ Consequently, Judge

73. *Id.* at *53.

74. Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991, 1993 (2007).

75. *Microsoft*, 2013 U.S. Dist. LEXIS 60233, at *54-63. A list of factors Judge Robart elaborated on is contained in Appendix A, *infra*.

76. *Microsoft*, 2013 U.S. Dist. LEXIS 60233, at *64.

77. *Id.* at *213.

78. *Id.* at *212-14.

79. *Id.* at *216-19. It is beyond the scope of this Article to explore similarities and differences of patent pools and SEPs. It is enough to note that a patent pool is a more privately-driven arrangement in aggregating patents essential to the standard for the purpose of creating a *package* license. *Id.* at *217-18. More important is that the Department of Justice has a practice of issuing business review letters to advise the propriety of patent pools, focusing on whether only “essential” patents are included in the pool. *See, e.g.*, U.S.

Robart arrived at FRAND rates that were far lower than what Motorola proposed.⁸⁰

Later, one other district court judge joined forces with Judge Robart, largely adopting his FRAND-rate framework.⁸¹ Another district court presiding over a FRAND-rate dispute refused to follow Judge Robart's framework, dismissing the royalty-stacking argument as "theoretical."⁸² Yet another district judge in a FRAND-rate case found it unnecessary to modify the *Georgia-Pacific* factors, given that "a modified analysis . . . would have a *de minimis* impact on the overall royalty," because the component compliant to the standard "make[s] up an incredibly small percentage of the total products at issue."⁸³ Related to the judge's perspective, Professor Jorge Contreras and David Newman commenting on implications of *Microsoft v. Motorola* observed:

[T]he judge was fortunate to be evaluating two widely adopted standards (H.264 and 802.11) that were the subject of patent pools with published royalty rates. However, even

Philips Corp. v. Int'l Trade Comm'n, 424 F.3d 1179, 1194 (Fed. Cir. 2005) (mentioning the DOJ's business review letter). In contrast, SEPs are *declared* essential by owners, and essentiality is not separately reviewed by the DOJ or SDOs. See Jorge L. Contreras, *Fixing FRAND: A Pseudo-Pool Approach to Standards-Based Patent Licensing*, 79 ANTITRUST L.J. 47, 60 (2013) (noting the lack of independent verification of essentiality by SDOs and the problem of over-disclosure arising from it).

80. *Compare Microsoft*, 2013 U.S. Dist. LEXIS 60233, at *20 (setting a FRAND royalty rate for one standard at 0.555 cents per unit), *with id.* at *13 (2.25% of the price of the end product).

81. *In re Innovatio IP Ventures, LLC Patent Litig.*, No. 11C 9308, 2013 U.S. Dist. LEXIS 144061, at *55 (N.D. Ill. Sept. 27, 2013) ("This court will generally follow [Judge Robart's] approach to reconstruct a hypothetical negotiation over a RAND rate.").

82. *Ericsson Inc. v. D-Link Sys., Inc.*, No. 6:10-CV-473, 2013 WL 4046225, at *18 (E.D. Tex. Aug. 6, 2013) ("The best word to describe Defendants' royalty stacking argument is theoretical."). Aside from a higher royalty rate (\$0.15 per product), *D-Link* differs from *Microsoft* and *In re Innovatio* in that the jury awarded a FRAND rate, while a bench trial was held to determine a FRAND rate in *Microsoft* and *In re Innovatio*.

83. *Commonwealth Scientific & Indus. Research Org. v. Cisco Sys., Inc.*, No. 6:11-cv-343, 2014 WL 3805817, at *12 (E.D. Tex. July 23, 2014). Also, commentators point out that the fact of *Cisco* differs from *Microsoft* and *In re Innovatio* in that it involves computing *past* damages, rather than setting a FRAND rate in prospective. See David Long, *Judge Davis determines reasonable royalty damages for WiFi standard essential patent (CSIRO v. Cisco)*, ESSENTIAL PATENT BLOG (July 28, 2014), <http://www.essentialpatentblog.com/2014/07/judge-davis-sets-royalty-rate-for-wifi-standard-essential-patent-csiro-v-cisco/>.

in this case, the details of certain private license agreements disclosed to the court and which factored into his analysis were redacted from the public versions of the opinion.⁸⁴

Not all judges will be “fortunate” enough to find references of a FRAND rate if business records relevant to setting the rate remain sealed from public disclosure. It bears emphasis that rewarding SEP owners with the *ex post* incremental value of SEPs is contrary to the rationale behind adopting the FRAND commitment.⁸⁵ Consequently, effective resolution of SEP disputes may hinge on enhancing the transparency of FRAND commitments by not allowing parties to keep secret any past FRAND-licensing information.

C. Disapproval of the USITC’s FRAND Determination

For the first time since 1987, the President of the United States disapproved the U.S. International Trade Commission’s exclusion order entered upon a finding of patent infringement,⁸⁶ strongly signaling that the FRAND commitment shall be counted as an important public interest factor. This disapproval perhaps puts to an end any remaining doubt as to whether implementing FRAND is in the public interest.

In *Certain Electronic Devices, Including Wireless Communication Devices, Portable Music and Data Processing Devices, and Tablet Computers*, the ITC found Apple’s old models of a smartphone and tablet PC infringed on Samsung’s SEPs, and subsequently issued an exclusion order banning sales and imports of the infringing devices under section 337 of the Tariff Act.⁸⁷ In the course of initial determination, however, the Administrative Law Judge spared a few pages for the FRAND negotiation between Samsung and Apple, and the full commission affirmed that Apple failed to carry the burden to show its FRAND defense.⁸⁸

84. Contreras & Newman, *supra* note 2, at 40 n.122.

85. *Microsoft*, 2013 U.S. Dist. LEXIS 60233, at *63.

86. EXEC. OFFICE OF THE PRESIDENT & THE U.S. TRADE REPRESENTATIVE, LETTER TO CHAIRMAN IRVING WILLIAMSON, DISAPPROVAL OF THE USITC’S DETERMINATION, 1 (Aug. 3, 2013) [hereinafter USTR Letter], *available at* http://www.ustr.gov/sites/default/files/08032013%20Letter_1.PDF.

87. *Certain Electronic Devices, Including Wireless Communication Devices, Portable Music and Data Processing Devices, and Tablet Computers*, USITC Inv. No. 337-TA-794, 2013 WL 2453722, *1 (June 4, 2013) (Final).

88. *See Certain Electronic Devices*, USITC Inv. No. 337-TA-794, Comm’n Op., at 45 (July 2013) (full commission). *See Certain Electronic Devices*, USITC

On behalf of the President, the U.S. Trade Representative issued a letter disapproving the ITC determination for *policy* reasons. In doing so, the letter first cited with approval the “Policy Statement” jointly issued by the DOJ and the PTO, which expressed substantial concerns about patent hold-up in enforcing FRAND-encumbered SEPs.⁸⁹ Also important to the policy perspective was that the technical standards capable of enriching consumers cannot be effectively implemented if SEP owners are not held to the FRAND commitment.⁹⁰ Siding with the DOJ and the PTO, the letter sketched guidance for determining under what circumstances an ITC exclusion order could be an appropriate remedy,⁹¹ which seems modeled from the *FTC-Google* settlement.⁹²

The letter did not pass judgment on whether Samsung in fact failed to comply with its FRAND commitments or whether Apple’s products were non-infringing. It merely *recommended* that the ITC “make explicit findings on [FRAND] issues to the maximum extent possible.”⁹³ As a result, Samsung’s position became worse off than it would have been if ruled not FRAND by the ITC, because the disapproval is “not reviewable” by the appellate court.⁹⁴ Although the ITC has the authority to issue a

Inv. No. 337-TA-794, 2012 WL 4752221, Initial Determination on Violation of Section 337, at *243-53 (Sept. 14, 2012) (ALJ).

89. U.S. DEP’T OF JUSTICE & U.S. PATENT AND TRADEMARK OFFICE, POLICY STATEMENT ON REMEDIES FOR STANDARD-ESSENTIAL PATENTS SUBJECT TO VOLUNTARY FRAND COMMITMENTS 4-6 (2013), *available at* <http://www.justice.gov/atr/public/guidelines/290994.pdf>.

90. USTR Letter, *supra* note 86, at 2.

91. *Id.* at 2 n.3.

92. *See supra* Part III.A.

93. USTR Letter, *supra* note 86, at 3. Thereafter, ALJ Essex in the 337-TA-868 investigation found that, while the respondents did not infringe SEPs at issue, their FRAND defenses were unavailing for failure to first participate in the SDO procedure designed to resolve license disputes. *See Certain Wireless Devices with 3G and/or 4G Capabilities and Components Thereof*, USITC Inv. No. 337-TA-868, Initial Determination on Violation of Section 337, at 108-13 (June 26, 2012). ALJ Essex added that he found no evidence of “patent hold-up” in this investigation, and sharply disagreed with the position taken by the FTC and PTO/DOJ that the availability of exclusion orders in the ITC forum should be limited. *Id.* at 123-26.

94. *Duracell, Inc. v. U.S. Int’l Trade Comm’n*, 778 F.2d 1578, 1581 (Fed. Cir. 1985) (holding that presidential disapproval is not reviewable in the appellate court). It is noted that Samsung was once a beneficiary of the presidential disapproval in 1987. *See Presidential Disapproval of a Section 337 Determination*, 52 Fed. Reg. 46011-02 (Dec. 3, 1987) (disapproving out of concerns that the exclusion order could reach beyond Samsung’s products).

modified remedial order after presidential disapproval,⁹⁵ the letter indicates that the ITC proceeding is no longer in effect,⁹⁶ probably because FRAND determination will likely require a new investigation.⁹⁷

In the wake of the disapproval, however, the ITC will give due weight to the FRAND commitment, because a policy underscored by the President or Congress is often an important factor for the ITC in determining whether issuing an exclusion order would be in the public interest.⁹⁸ These consequences, combined with the rarity of such disapproval, demonstrate plainly the interface between the public interest and FRAND commitments.

D. Baseball-Style Arbitration in Setting FRAND Royalties

Complex issues surrounding the FRAND commitment spur a variety of academic discussions; among them, Professors Mark Lemley and Carl Shapiro jointly proposed a “simple approach” for SDOs to implement a FRAND commitment.⁹⁹ In the SDO setting, they view “baseball-style” arbitration as a “best practice.”

In baseball-style arbitration, each party submits its final offer to the arbitrator, who then must “pick the better of two proposed royalty rates.”¹⁰⁰ If the definition of “FRAND” continues to be unclear, the parties in a SEP negotiation are likely tempted to overstate (if licensor) or understate (if licensee) a reasonable royalty

95. See *Young Eng’rs, Inc. v. U.S. Int’l Trade Comm’n*, 721 F.2d 1305, 1313 (Fed. Cir. 1983).

96. USTR Letter, *supra* note 86, at 4 (“[Samsung] may continue to pursue its rights *through the courts.*”) (emphasis added).

97. See *Young Eng’rs*, 721 F.2d at 1313 (allowing the ITC to issue a modified remedial order after presidential disapproval where no new issues were asserted by the parties).

98. See, e.g., *Certain Personal Data and Mobile Communications Devices and Related Software*, Inv. No. 337-TA-710, USITC Pub. 4331, Comm’n Op., at 80 n.54 (Dec. 2011) (citing President Obama’s State of the Union address stressing the importance of high speed wireless internet); *Certain Inclined-Field Acceleration Tubes & Components Thereof*, Inv. No. 337-TA-67, USITC Pub. 1119, Comm’n Op., at 23 (Dec. 1980) (noting that the President and Congress have issued declarations in support of basic science research); *Certain Automatic Crankpin Grinders*, Inv. No. 337-TA-60, USITC Pub. 1022, Comm’n Op., at 20 (Dec. 1979) (noting that Congress and the President have established a policy to increase the fuel economy of automobiles in the energy crisis).

99. Mark A. Lemley & Carl Shapiro, *A Simple Approach to Setting Reasonable Royalties for Standard-Essential Patents*, 28 BERKELEY TECH. L.J. 1135 (2013).

100. *Id.* at 1145.

number, hoping that the arbitrator picks the number more favorable to its own. Instead, baseball-style arbitration incentivizes each party to make a “reasonable” offer because the arbitrator is obliged to pick one without modification.¹⁰¹

Again, however, the success of baseball-style arbitration depends in large part on how effectively the arbitrator gains access to each party’s past FRAND licensing information. To that end, Professors Lemley and Shapiro argued that “willing licensees” are entitled to know any related arbitration award because such disclosure is justified by the “non-discriminatory” component of the FRAND commitment.¹⁰² But, in the absence of efforts to clarify the definition of “FRAND” on the part of SDOs, secrecy of past licensing information will likely continue to undermine the effectiveness of baseball-style arbitration.¹⁰³

A burden of proof on a FRAND royalty will be another impediment to overcome for effective resolution of FRAND disputes in baseball-style arbitration. Since a license is an affirmative defense to patent infringement, a licensee as an alleged infringer bears a burden of showing the existence of a license.¹⁰⁴ Following this traditional approach in patent law, the courts and the ITC facing recent FRAND litigation allocated to licensees the burden of proof on a FRAND royalty.¹⁰⁵ In this circumstance, a licensor (SEP owner), who is keeping past FRAND rates secret, will not be incentivized to make a reasonable first offer, knowing that a licensee has the ultimate burden of proof.

SDOs in an effort to mitigate competitive concerns may want to change bylaws to the extent that the burden shifts or at least is neutralized in submitting FRAND disputes to arbitration. But such amendment of bylaws is a distant possibility because it entails a complicated democratic process inside the SDO, which is

101. Carrie J. Menkel-Meadow et al., *DISPUTE RESOLUTION BEYOND THE ADVERSARIAL MODEL* 401 (2d ed. 2011).

102. Lemley & Shapiro, *supra* note 99, at 1145.

103. *Id.*

104. *See* *Stockton E. Water Dist. v. United States*, 583 F.3d 1344, 1360 (Fed. Cir. 2009).

105. *In re Innovatio IP Ventures, LLC Patent Litig.*, 956 F. Supp. 2d 925, 936 (N.D. Ill. 2013); *see also* *Certain Elec. Devices, Inv. No. 337-TA-794*, 2012 WL 4752221, at *243-53 (Sept. 14, 2012) (Initial Determination on Violation of Section 337). *But cf.* Jorge L. Contreras, *A Brief History of FRAND*, 80 *ANTITRUST L.J.* (forthcoming 2015) (manuscript at 20) (noting that a compulsory licensing decree in the 1950s imposed on antitrust defendants (patentees) a burden of proof to establish a reasonable royalty by a preponderance of evidence (citing *United States v. Textile Mach. Works, No. 43-671*, 1950 U.S. Dist. LEXIS 1909, at *12 (S.D.N.Y. Oct. 9, 1950))).

composed of members with different business practices and stakes.¹⁰⁶ A licensee will then have to go through a procedure asking a court or an arbitrator to order a SEP owner to disclose past FRAND rates. Such evidentiary and procedural hardships could be minimal if a licensee becomes able to access arbitrated FRAND rates in the public database.

IV. ARGUMENTS AGAINST CONFIDENTIALITY OF FRAND ROYALTIES IN SEP ARBITRATION

As stated in Part III, the current judicial framework and the proposals on government and academic fronts may not be a best fit for resolving FRAND disputes, given that they all leave untouched the confidentiality of FRAND rates. Lifting confidentiality of a FRAND royalty rate could be a key to successful implementation of the FRAND commitment. Part IV presents the reasons why lifting confidentiality better comports with the FRAND commitment, focusing on its public nature.

First, similar to patent validity and scope, confidentiality of FRAND rates in SEP arbitration runs counter to the public nature of FRAND commitments. Second, given the “safeguard” nature of the FRAND commitment, the public is entitled to know the additional *ex post* value of SEPs that standard implementers will likely pass on to consumers. Third, the public’s entitlement to know a FRAND royalty rate is more acute than its interest in patent validity and scope, because the recent development of SEP enforcement moves to target downstream businesses and end-users.

A. Similar to Patent Validity and Scope, Confidentiality of FRAND Rates in SEP Arbitration Runs Counter to the Public Nature of FRAND Commitments

Analogy to section 294 of the Patent Act lends support to arguments against confidentiality of FRAND royalties. It may well be appropriate to lift confidentiality of a FRAND rate for the same reasons that Congress, in honor of *Lear*, lifted confidentiality of patent validity/infringement by adding section 294.¹⁰⁷ In *Lear*, the Supreme Court stressed that the public interest in favor of “free competition” over the patent monopoly trumps contractual license

106. Jorge L. Contreras, Assoc. Professor of Law, S.J. Quinney Coll. of Law, Remarks at American University Washington College of Law’s Patent + Policy Forum: Current Proposals to Amend U.S. Patent Law (Nov. 8, 2013).

107. See *supra* Part II.A.3.

obligations,¹⁰⁸ which the Court in the 2013 term reaffirmed.¹⁰⁹ *Lear's* tenet was also underlying the enactment of subsection 294(e), mandating parties in arbitration to report to the PTO arbitrated findings on validity and infringement. Similar to patent validity and scope, the FRAND commitment is of a public nature in the interest of competition, because it enables the public to benefit from the technical standards by serving as a “safeguard” to protect standard implementers from possible manipulation or deception in the standard-setting process.¹¹⁰

Further similarities are easily discernable as well. Just as a patent is granted *ex parte* with no third-party involvement, most SEPs are *declared* essential by SEP owners without the public's involvement when a FRAND commitment is made.¹¹¹ Also, just as patent validity can affect any party and patent invalidation broadens the public domain for all,¹¹² a FRAND commitment can affect any standard implementer because implementers can enforce the FRAND commitment as a third party beneficiary.¹¹³

Moreover, the public nature of a FRAND royalty rate could be more pronounced than usual “reasonable royalty” calculations, because a FRAND rate awarded in arbitration is likely to be indicative of the likelihood that a standard-essential patent is valid and infringed. Professors Lemley and Shapiro observed that, unlike in the litigation setting where a patent at issue is *assumed* valid and infringed, an arbitrator and parties in arbitration will likely base a FRAND rate upon the evidentiary weight of patent validity and infringement.¹¹⁴ The public's interest in the patent would be proportional to the likelihood of invalidity and non-infringement, and logically, a lower FRAND award is more likely as the possibility that the standard-essential patent on the table is found invalid or not infringed grows higher.¹¹⁵ Such strong association with the validity and scope of SEPs further evidences the public nature of FRAND royalty rates calculated in arbitration.

108. See *supra* Part II.A.1.

109. *Medtronic, Inc. v. Mirowski Family Ventures, LLC*, 134 S. Ct. 843, 852 (2014) (quoting *Lear*).

110. See *supra* text accompanying notes 57-59.

111. See Contreras, *supra* note 79, at 60.

112. See *supra* text accompanying note 9.

113. *Microsoft Corp. v. Motorola, Inc.*, No. C10-1823JLR, 2013 U.S. Dist. LEXIS 60233, at *15 (W.D. Wash. Apr. 25, 2013).

114. Lemley & Shapiro, *supra* note 99, at 1151-52.

115. *Id.* at 1151.

It may be countered that the absence of patent licenses from the language of section 294 of the Patent Act shows a lack of legislative intent. The simple answer to the question why Congress mandated public disclosure of only a finding of patent validity and infringement could be that the necessity of FRAND commitments was not apparent in 1982, the year when section 294 was enacted.¹¹⁶ Given that *Allied Tube* was decided in 1988, it is likely that the FRAND commitment has gained more traction since *Allied Tube* stressed the importance of the “safeguards sufficient to prevent the standard-setting process from being biased by members.”¹¹⁷ Although *Allied Tube* did not directly address FRAND, it is evident that the FRAND commitment is one of the safeguards, and the opportunistic behavior of members abusing the malleability of FRAND poses a risk of distorting the integrity and procompetitive benefits of SDOs. In light of such risks associated with the standard-setting process, the FRAND commitment must “mean something” more than an “empty promise.”¹¹⁸

It has also been countered that, because the license agreement is a product of an extensive, private negotiation between sophisticated parties, it “reflects their judgments as to what is economically ‘reasonable’ within the meaning of the relevant contractual [F]RAND commitment, *taking into account anything and everything that a rational industry participant would want to take into account.*”¹¹⁹ And the argument concludes, “[T]here is no reason to believe that other litigants in this industry will not likewise be able to reach negotiated solutions within a reasonable time frame.”¹²⁰

116. It is known that the first FRAND policy was adopted in 1959 by the American Standards Association, a predecessor to the American National Standards Institute (ANSI). See Contreras, *supra* note 105, at 6.

117. *Allied Tube & Conduit Corp. v. Indian Head, Inc.*, 486 U.S. 492, 509 (1988).

118. Nicholas Widnell, Former Deputy Assistant Dir., Anticompetitive Practices Div., Fed. Trade Comm’n, Remarks at American University Washington College of Law’s Patent + Policy Forum: Current Proposals to Amend U.S. Patent Law (Nov. 8, 2013).

119. Brief of Amicus Curiae Qualcomm Inc. in Support of Affirmance on RAND Issues at 18, *Ericsson, Inc. v. D-Link Sys., Inc.*, No. 2013-1625 (Fed. Cir. Feb. 27, 2014), 2014 WL 1159108 (emphasis in original).

120. Qualcomm Inc.’s Response to the Comm’n’s Request for Comments on the Proposed Agreement Containing Consent Order at 9, Motorola Mobility LLC and Google Inc., File No. 121-0120 (F.T.C. Feb. 22, 2013), available at http://www.ftc.gov/sites/default/files/documents/public_comments/2013/02/563708-00022-85574.pdf.

Such counterargument is only partially correct for three reasons. First, looking to the FRAND commitment only vis-à-vis “contract” obligations between “legally sophisticated” parties loses sight of the fact that the FRAND commitment stems from *both* contractual obligations and competitive concerns associated with SEPs, considering that a contract is also subject to antitrust law when it is “in restraint of trade.” Second, although SDOs are intended to benefit “the public” via widespread adoption of the standard, the public is not a part of the FRAND regime and therefore has no recourse from anticompetitive harm caused by a higher FRAND rate. Third, “legally sophisticated parties” are no longer the only players in the industry. Now that downstream businesses and even end-users are often brought into FRAND license disputes, such recent development of SEP enforcement adds weight to the competitive concerns associated with SEPs. The remainder of this Article further explores the second and third aspects of FRAND license disputes.

B. Given the “Safeguard” Nature of the FRAND Commitment, the Public is Entitled to Know the Additional Ex Post Value of SEPs that Standard Implementers Will Likely Pass on to Consumers

If the Smartphone War continues and any FRAND royalty rate remains hotly-disputed, consumers will have no choice but to pay higher prices flowing from “unreasonable or discriminatory royalties,” which consumer electronics manufacturers will pass on to consumers.¹²¹ Arbitration resembles settlement to the extent that confidentiality plays a key motivation and serves interests of the parties well.¹²² SEP owners may insist on secrecy to protect sensitive FRAND royalty rates from the eyes of other potential infringers; licensees might as well coordinate with SEP owners to avoid future SEP disputes.¹²³ With this meeting of minds, Professor La Belle argues, the public bears the majority of the harm because parties are able to “pass losses onto the consuming public.”¹²⁴

121. See Analysis of Proposed Consent Order to Aid Public Comment, *supra* note 64, at 6.

122. See La Belle, *supra* note 13, at 387 (“[S]ecrecy of [settlement] may serve the litigants well.”); see Contreras & Newman, *supra* note 2, at 16 (“[I]t is this very confidentiality that often makes arbitration more attractive than litigation in open court.”).

123. See La Belle, *supra* note 13, at 387.

124. *Id.* at 388. Professor La Belle goes so far as to argue that the court should not allow certain patent settlements to be confidential. *Id.* at 432.

Observing that a FRAND commitment is made to the *market* rather than a particular licensee, Professor Contreras proposes a “market reliance” theory as a tool to ensure the implementation of FRAND commitments.¹²⁵ Professor Contreras notes that contract-based theories that have been used to interpret the FRAND commitment (breach of contract and promissory estoppel) may not account for “complex technology markets characterized by thousands of patents and dozens of patent holders.”¹²⁶ Again, treating the FRAND commitment solely as a matter of parties’ contract disputes loses the big picture that SEP licensing has a public component in it.¹²⁷

In light of the diversity of public characters rooted in the FRAND commitment, the public is entitled to know an established range of FRAND rates in arbitration settings as much as the public is entitled to know patent validity and scope. In contrast to that a patent “may or may not be valid, and may or may not be infringed,”¹²⁸ the existence of a FRAND commitment is generally undisputed. SDO members cannot revoke a FRAND commitment later in an attempt to take advantage of *ex post* monopoly power gained by virtue of the collective SDO decision of standardization. Some courts have held that such conduct amounts to a violation of antitrust laws.¹²⁹

More importantly, the direct link is to the public’s interest in fair and robust competition in the market and to the fact that the FRAND commitment is made in exchange for antitrust immunity from *per se* condemnations.¹³⁰ Serving as a “safeguard” under the mandate of *Allied Tube*, the FRAND commitment keeps in check any “patent hold-up,” which may raise a product price to the detriment of consumers. Thus, possibly more than patent validity

125. Jorge L. Contreras, *A Market Reliance Theory for FRAND Commitments and Other Patent Pledges*, 2015 UTAH L. REV. (forthcoming 2015) (manuscript at 3-4), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2309023.

126. *Id.* at 3.

127. *But see* Roger G. Brooks & Damien Geradin, *Interpreting and Enforcing the Voluntary FRAND Commitment*, 9 INT’L J. IT STANDARDS & STANDARDIZATION RES., no. 1, 2011 at 1, 3 (arguing that a FRAND commitment is solely a voluntary contract because a patentee may decline to join an SDO and most SDOs make a FRAND commitment voluntary for members).

128. *Fed. Trade Comm’n v. Actavis, Inc.*, 133 S. Ct. 2223, 2231 (2013).

129. *Broadcom Corp. v. Qualcomm Inc.*, 501 F.3d 297, 314 (3d Cir. 2007) (holding that Qualcomm’s subsequent breach of the FRAND commitment is actionable anticompetitive conduct under section 2 of the Sherman Act).

130. *See supra* text accompanying note 48.

and scope, a FRAND rate is of a public nature in the interest of protecting competition as well as consumers.

In the current FRAND regime, however, the public and consumers are not part of the equation calculating a FRAND rate. Assuming that the status quo persists, consumers will have little recourse to remedy higher prices charged in derogation of the FRAND commitment. Lifting confidentiality of FRAND royalty rates in SEP arbitration will not only aid with effective resolution of SEP disputes between parties, but also eliminate the public's doubt as to whether SEP owners are honoring their FRAND commitments.

C. The Public's Entitlement to Know a FRAND Royalty Rate is More Acute than its Interest in Patent Validity and Scope, because the Recent Development of SEP Enforcement Moves to Target Downstream Businesses and End-Users

One recent development of SEP enforcement is to increasingly target downstream businesses and end-users by the so-called "Patent Assertion Entity" (PAE). While their main target in the past was large operating firms, PAEs in 2012 initiated more than 60% of all patent litigation and sued more non-tech companies than tech companies.¹³¹

In re Innovatio IP Ventures, LLC Patent Litigation illustrates well how SEP enforcement targets consumer retailers.¹³² There, Innovatio (a PAE) sued numerous hotels, coffee shops, restaurants, supermarkets, and other commercial users of Wi-Fi technology, alleging that the defendants infringed Innovatio's 23 SEPs by making wireless internet available to their customers.¹³³ Having gone through judicial determinations on essentiality and antitrust immunity,¹³⁴ the district court set the FRAND rate upon applying, in large part, Judge Robart's framework in *Microsoft v.*

131. Colleen Chien, *Patent Trolls by the Numbers 1* (Santa Clara Univ. Legal Studies Research Paper No. 08-13, 2013), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2233041. See also Yoonhee Kim, *Reconciling Twombly and Patent Pleadings Beyond the Text of Form 18*, 13 CHI.-KENT J. INTELL. PROP. 511, 526 (2014).

132. *In re Innovatio IP Ventures, LLC Patent Litig.*, 921 F. Supp. 2d 903 (N.D. Ill. 2013).

133. *Id.* at 906.

134. *Id.* at 910 (*Noerr-Pennington* immunity); *In re Innovatio IP Ventures, LLC Patent Litig.*, 956 F. Supp. 2d 925, 936 (N.D. Ill. 2013) (essentiality).

Motorola.¹³⁵ But again, substantial portions of Innovatio’s past licensing information are redacted in the opinion.¹³⁶

Examining how a SEP owner benefits from keeping license agreements secret can help us better understand this new trend of patent enforcement. Imagine a situation in which a small restaurant with ten employees was sent a demand letter from a PAE asking a license payment of “\$1,000 per employee”¹³⁷ for offering customers a wireless internet service covered by its SEPs. Let us further assume that the wireless service is critical to the business. The restaurant may first want to check whether the allegation of infringement is meritorious and whether paying it off is a better business choice.

The first option will be easily set aside, considering that the cost of evaluating patent infringement coupled with claim interpretation is perhaps unbearable to such a small business. It is reported that construing claims of a patent is a daunting task even to legally sophisticated parties, because some patents suffer from “notice problems,” as “[claims] often provide little guidance as to their coverage,”¹³⁸ despite that section 112 of the Patent Act requires an inventor to “*distinctly* claim[] the subject matter which [he] regards as the invention.”¹³⁹ In this situation, the restaurant may likely want to know the established royalty rates before grappling with the option to pay off.

However, most license agreements are confidential where a case settles with a license.¹⁴⁰ By keeping them secret, patentees can then leverage such settlements to demand a higher royalty because prior licenses could be construed by the restaurant (and its

135. In re Innovatio IP Ventures, LLC Patent Litig., No. 11C 9308, 2013 U.S. Dist. LEXIS 144061, at *55 (N.D. Ill. Sept. 27, 2013).

136. *Id.*

137. This number is from the FTC’s enforcement action against PAEs. See MPHJ Tech. Invs., LLC, FTC File No. 142-3003, Complaint, 6-7 (2014), available at <http://www.ftc.gov/enforcement/cases-proceedings/142-3003/mphj-technology-investments-llc-matter> (noting that PAE sent demand letters to small businesses, soliciting a license payment of \$1,000 per employee).

138. FED. TRADE COMM’N, THE EVOLVING IP MARKETPLACE: ALIGNING PATENT NOTICE AND REMEDIES WITH COMPETITION 80-81 (2011), available at <http://www.ftc.gov/os/2011/03/110307patentreport.pdf>.

139. 35 U.S.C.S. § 112(b) (LexisNexis 2011) (definiteness) (emphasis added). Recently, the Supreme Court clarified the definiteness requirement, ruling that to be definite, “a patent’s claims, viewed in light of the specification and prosecution history, [must] inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014).

140. See Lemley & Shapiro, *supra* note 74, at 2022.

counsel) as evidence that the patent is “stronger and more valuable.”¹⁴¹ Similarly unhelpful to the restaurant are trial records pertinent to royalty rates, because those are already redacted as in *Microsoft v. Motorola* and *In re Innovatio*.¹⁴²

Even if available, the restaurant could possibly be faced with an inflated number. When courts rely on damages experts familiar with industry practice or past royalty rates,¹⁴³ those experts are faced with the same problem that most license agreements are sealed.¹⁴⁴ Professors Lemley and Shapiro observed that damages experts often end up looking into publicly available royalty rates, which tend to be larger because a patentee is obligated to disclose only “material” licenses under federal securities law.¹⁴⁵ This distortion coming from the secrecy of license agreements may result in a “windfall” royalty for patent owners.¹⁴⁶ Consequently, the restaurant is left with few options and may end up paying off the PAE.

Unsurprisingly, the White House’s announcement in June 2013 devoted most of its pages to calling on Congress to help “empower[] downstream users.”¹⁴⁷ Following up on the announcement, the White House in February 2014 renewed its commitment to protect “consumers and main-street retailers [from] entering into costly litigation or settlements.”¹⁴⁸ Thus, for this government initiative to be effective, it may need to deal with the

141. See La Belle, *supra* note 13, at 407.

142. See *supra* text accompanying note 84 (*Microsoft*) and text accompanying note 136 (*In re Innovatio*).

143. See, e.g., *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1324-29 (Fed. Cir. 2009) (examining the statement of experts to decide a reasonable royalty considering *Georgia-Pacific* factors).

144. See Lemley & Shapiro, *supra* note 74, at 2022.

145. *Id.* (explaining that the most significant source of patent licenses is federal securities law filings).

146. See La Belle, *supra* note 13, at 408.

147. OFFICE OF THE PRESS SEC’Y, THE WHITE HOUSE, FACT SHEET: WHITE HOUSE TASK FORCE ON HIGH-TECH PATENT ISSUES 2-3 (2013), available at <http://www.whitehouse.gov/the-press-office/2013/06/04/fact-sheet-white-house-task-force-high-tech-patent-issues>.

148. OFFICE OF THE PRESS SEC’Y, THE WHITE HOUSE, FACT SHEET—EXECUTIVE ACTIONS: ANSWERING THE PRESIDENT’S CALL TO STRENGTHEN OUR PATENT SYSTEM AND FOSTER INNOVATION 1 (2014), available at <http://www.whitehouse.gov/the-press-office/2014/02/20/fact-sheet-executive-actions-answering-president-s-call-strengthen-our-p> (announcing that the PTO is launching an online toolkit aimed at empowering consumers with answers to common questions).

high cost of adjudicating a FRAND rate, for example, as incurred in *In re Innovatio*.¹⁴⁹

Moreover, consumers and main-street retailers will find it hard to challenge patent validity, because a patent is presumed valid,¹⁵⁰ and the burden of proof rests with a challenger by clear and convincing evidence.¹⁵¹ An accused infringer may want to dispute infringement, but the fact that a patent is “standard-essential” could be enough to convey a perception to legally unsophisticated parties that the patent is necessarily infringed once the accused product conforms to the standard. Conceding essentiality to assert FRAND defenses is another possible option to consider, e.g., to take advantage of the *Microsoft v. Motorola* framework. However, again, an accused infringer bears the burden of proof on essentiality in such a scenario.¹⁵²

A more direct public access to FRAND royalty rates, without being hindered by confidentiality, will empower the public to tackle deleterious impacts flowing from the confidentiality and ambiguous meaning of FRAND. It will likely be countered that lifting confidentiality of FRAND rates may dissuade parties from using arbitration, which is less costly and time-consuming than court adjudication. However, ensuring “transparency” of patent information weighs in with more force, where protecting end-users from abusive patent enforcement is one of the top administrative and legislative priorities.¹⁵³ By consulting the USPTO database, as already established for arbitral awards of validity and infringement under section 294,¹⁵⁴ the public will be able to assess for themselves whether a SEP license demand is “fair, reasonable, and non-discriminatory.” And arbitrators will be able to set a FRAND

149. See *supra* text accompanying notes 134-35.

150. 35 U.S.C.S. § 282(a) (LexisNexis 2011).

151. *Microsoft Corp. v. i4i Ltd. P’ship*, 131 S. Ct. 2238, 2242 (2011) (holding that an invalidity defense must be proved by clear and convincing evidence).

152. *In re Innovatio IP Ventures, LLC Patent Litig.*, 956 F. Supp. 2d 925, 936 (N.D. Ill. 2013) (holding that the burden of proof on essentiality rests with an accused infringer asserting FRAND defenses).

153. See OFFICE OF THE PRESS SEC’Y, *supra* note 148 (“Building upon the President’s State of the Union remarks, the Administration urges Congress to pass a bipartisan law designed to curtail abusive patent litigation and improve *transparency* in the patent system.”) (emphasis added). See also Patent Transparency and Improvements Act, S. 1720, 113th Cong. § 5 (2013) (treating the sending of “bad-faith demand letters” as unfair or deceptive acts or practices subject to the FTC’s enforcement authority).

154. All 294 filings of arbitral awards are listed in the “Patent Application Information Retrieval (PAIR)” database available at the USPTO website. Any party can search the PAIR database with the patent number.

royalty rate more accurately if the party's past FRAND licensing rates set under similar circumstances to the case in arbitration are publicly available. Also, many demand letter recipients may take comfort if arbitrated FRAND royalty rates are computed based on the frameworks established in *Microsoft v. Motorola* and *In re Innovatio*, both of which found FRAND royalty rates fairly low.¹⁵⁵

V. CONCLUSION

Until the early 1980s, the courts put more focus on the adverse-to-competition aspect of patents, and antitrust enforcers accordingly labeled many types of patent license arrangements as a per se violation of antitrust laws (the "Nine No-Nos").¹⁵⁶ Those days are long gone. Now it is generally accepted that a patent is "a critical engine driving the new economy,"¹⁵⁷ and that patent licensing is usually procompetitive.¹⁵⁸

The public in the past did not have to be vigilant of the patent licensing regime, not only because patent licenses are a product of commercial disputes, but also because the public stood to gain from the procompetitive benefits. Those days might be over, too. Now PAEs are targeting consumer retailers and end-users, demanding royalty payments by enforcing, or threatening to enforce, FRAND-encumbered SEPs.

This Article does not argue that all patent licensing terms be known to the public: only a FRAND licensing rate calls for scrutiny in light of its public nature. Now that the members of the public are being alleged to infringe SEPs, they are in a good position to demand that SEP owners honor the FRAND commitment, which is put in place as a safeguard to mitigate risks of patent hold-up and unfair competition. Lifting confidentiality of arbitral awards is not statutorily unprecedented, because section 294 of the Patent Act already lifted confidentiality of patent validity and infringement in the interest of the public and competition. By the same token, lifting confidentiality of FRAND royalty rates in SEP arbitration would be an effective measure to tackle unfair competition and deceptive business practices and to empower the public in the Smartphone Wars and in the face of SEP enforcement.

155. See *supra* text accompanying notes 80-81.

156. See GAVIL, KOVACIC & BAKER, *supra* note 51, at 1193.

157. *Id.*

158. U.S. DEP'T. OF JUSTICE & FED. TRADE COMM'N, ANTITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY 4-5 (1995).

APPENDIX A: LIST OF ORIGINAL AND MODIFIED *GEORGIA-PACIFIC*
FACTORS

Original <i>Georgia-Pacific</i> Factors	Modified <i>Georgia-Pacific</i> Factors
1. The royalties received by the patentee for the licensing of the patent in suit, proving or tending to prove an established royalty.	Factor 1 can find references in a negotiation made in the context of patent pools.
4. The licensor's established policy and marketing program to maintain his patent monopoly by not licensing others to use the invention or by granting licenses under special conditions designed to preserve that monopoly.	Factor 4 is inapplicable because SEP holders make commitments to license on FRAND terms.
5. The commercial relationship between the licensor and licensee, such as, whether they are competitors in the same territory in the same line of business; or whether they are inventor and promoter.	Factor 5 is inapplicable for the same reason related to Factor 4.
6. The effect of selling the patented specialty in promoting sales of other products of the licensee; the existing value of the invention to the licensor as a generator of sales of his non-patented items; and the extent of such derivative or convoyed sales.	Factor 6 is applicable only to the extent necessary to draw the ex ante value of the patent apart from the value associated with incorporation into the standard.
7. The duration of the patent and the term of the license.	Factor 7 will have little influence on FRAND rates.

8. The established profitability of the product made under the patent; its commercial success; and its current popularity.	Factor 8 is applicable only to the extent necessary to draw the ex ante value of the patent apart from the value associated with incorporation into the standard.
9. The utility and advantages of the patent property over the old modes or devices, if any, that had been used for working out similar results.	Factor 9 is important to draw the ex ante value of the patent.
10. The nature of the patented invention; the character of the commercial embodiment of it as owned and produced by the licensor; and the benefits to those who have used the invention.	Factor 10 is applicable only to the extent necessary to draw the ex ante value of the patent apart from the value associated with incorporation into the standard.
11. The extent to which the infringer has made use of the invention; and any evidence probative of the value of that use.	Factor 11 is applicable only to the extent necessary to draw the ex ante value of the patent apart from the value associated with incorporation into the standard.
12. The portion of the profit or of the selling price that may be customary in the particular business or in comparable businesses to allow for the use of the invention or analogous inventions.	Factor 12 must look only to customary practices of licensing FRAND-encumbered patents.
13. The portion of the realizable profit that should be credited to the invention as distinguished from non-patented elements, the manufacturing process, business risks, or significant features or improvements added by the infringer.	Factor 13 is applicable only to the extent necessary to draw the ex ante value of the patent apart from the value associated with incorporation into the standard.

<p>15. The amount that a licensor and a licensee would have agreed upon (at the time the infringement began) if both had been reasonably and voluntarily trying to reach an agreement.</p>	<p>Factor 15 must consider that a SEP holder is under an obligation to license its patents on FRAND terms.</p>
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